

**Henry Cheng**  
**Serial No.: 09/643,981**  
**Response to Office Action dated October 5, 2004**

**Listing of Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Claim 1 (Original):** A mixer for mixing sound signals, comprising:  
a mixer buffer for storing sample values for three or more sound channels, each sound channel including a main sound component and one or more auxiliary sound components;  
send paths for sending the auxiliary sound components for each sound channel to a sound effects processor; and  
return paths from the sound effects processor for respectively adding the effects-processed auxiliary sound components for each channel to the corresponding main sound component.

**Claim 2 (Original):** The mixer according to claim 1, further comprising:  
mixer volume controls for independently controlling the volume of the main and auxiliary sound components of each sound channel supplied to the mixer buffer.

**Claim 3 (Original):** The mixer according to claim 1, further comprising:  
a surround encoder,  
wherein the mixer buffer comprises left, right and surround sound channels and the surround encoder encodes information on the surround sound channel, including the effects-processed auxiliary sound components added to the surround channel, onto the left and right sound channels.

**Henry Cheng**  
**Serial No.: 09/643,981**  
**Response to Office Action dated October 5, 2004**

**Claim 4 (Original):** The mixer according to claim 1, wherein the sample values for three or more sound channels are accumulated for a plurality of voices

**Claim 5 (Original):** A sound effects processing system comprising:  
a sound effects processor; and  
a mixer comprising:

    a mixer buffer for storing sample values for three or more sound channels, each sound channel including a main sound component and one or more auxiliary sound components;

    send paths for sending the auxiliary sound components for each sound channel to the sound effects processor; and

    return paths from the sound effects processor for respectively adding the effects-processed auxiliary sound components for each channel to the corresponding main sound component.

**Claim 6 (Original):** The system according to claim 5, wherein the mixer further comprises:

    mixer volume controls for independently controlling the volume of the main and auxiliary sound components of each sound channel supplied to the mixer buffer.

**Claim 7 (Original):** The system according to claim 5, wherein  
the mixer further comprises a surround encoder, and  
the mixer buffer comprises left, right and surround sound channels and the surround encoder encodes information on the surround sound channel, including the effects-processed auxiliary sound components added to the surround channel, onto the left and right sound channels.

**Henry Cheng**  
**Serial No.: 09/643,981**  
**Response to Office Action dated October 5, 2004**

**Claim 8 (Original):** The system according to claim 5, wherein the sample values for three or more sound channels are accumulated for a plurality of voices.

**Claim 9 (Original):** The system according to claim 5, wherein the sound effects processor provides reverb to the auxiliary sound components for each sound channel.

**Claim 10 (Original):** The system according to claim 5, wherein the sound effects processor provides delay to the auxiliary sound components for each sound channel.

**Claim 11 (Original):** The system according to claim 5, wherein the sound effects processor provides chorus to the auxiliary sound components for each sound channel.

**Claim 12 (Original):** The system according to claim 5, wherein the sound effects processor processes the auxiliary sound components for each sound channel using the same sound effects parameters.

**Claim 13 (Original):** The system according to claim 5, wherein the sound effects processor processes the auxiliary sound components for each sound channel using different sound effects parameters.

**Claim 14 (Original):** A video game system comprising:  
a video game machine for executing a video game program; and  
a hand-held player controller connected to said video game machine and operable by a player to generate video game control signals for the video game program,

**Henry Cheng**  
**Serial No.: 09/643,981**  
**Response to Office Action dated October 5, 2004**

wherein said video game machine includes an audio system for generating sound signals for driving speakers, said audio system comprising:

a sound effects processor; and

a mixer comprising:

a mixer buffer for storing sample values for three or more sound channels, each sound channel including a main sound component and one or more auxiliary sound components;

send paths for sending the auxiliary sound components for each sound channel to the sound effects processor; and

return paths from the sound effects processor for respectively adding the effects-processed auxiliary sound components for each channel to the corresponding main sound component.

**Claim 15 (Original):** The system according to claim 14, wherein the mixer further comprises:

mixer volume controls for independently controlling the volume of the main and auxiliary sound components of each sound channel supplied to the mixer buffer.

**Claim 16 (Original):** The system according to claim 14, wherein the mixer further comprises a surround encoder, and the mixer buffer comprises left, right and surround sound channels and the surround encoder encodes information on the surround sound channel, including the effects-processed auxiliary sound components added to the surround channel, onto the left and right sound channels.

**Henry Cheng**  
**Serial No.: 09/643,981**  
**Response to Office Action dated October 5, 2004**

**Claim 17 (Original):** The system according to claim 14, wherein the sample values for three or more sound channels are accumulated for a plurality of voices.

**Claim 18 (Original):** The system according to claim 14, wherein the sound effects processor provides reverb to the auxiliary sound components for each sound channel.

**Claim 19 (Original):** The system according to claim 14, wherein the sound effects processor provides delay to the auxiliary sound components for each sound channel.

**Claim 20 (Original):** The system according to claim 14, wherein the sound effects processor provides chorus to the auxiliary sound components for each sound channel.

**Claim 21 (Original):** The system according to claim 14, wherein the sound effects processor processes the auxiliary sound components for each sound channel using the same sound effects parameters.

**Claim 22 (Original):** The system according to claim 14, wherein the sound effects processor processes the auxiliary sound components for each sound channel using different sound effects parameters.

**Claim 23 (Original):** In an audio system, a method of mixing sound signals, comprising:

**Henry Cheng**  
**Serial No.: 09/643,981**  
**Response to Office Action dated October 5, 2004**

storing sample values for three or more sound channels, each sound channel including a main sound component and one or more auxiliary sound components;

sending the auxiliary sound components for each sound channel to a sound effects processor; and

respectively adding the effects-processed auxiliary sound components for each channel to the corresponding main sound component.

**Claim 24 (Original):** The method according to claim 23, further comprising:  
independently controlling the volume of the main and auxiliary sound components of each sound channel.

**Claim 25 (Original):** The method according to claim 23, wherein the three or more sound channels include left, right and surround sound channels and information on the surround sound channel, including the effects-processed auxiliary sound components added to the surround channel, are encoded onto the left and right sound channels.

**Claim 26 (Original):** The method according to claim 23, wherein the sample values for three or more sound channels are accumulated for a plurality of voices.

**Claim 27 (Original):** The method according to claim 23, wherein the sound effects processor provides reverb to the auxiliary sound components for each sound channel.

**Claim 28 (Original):** The method according to claim 23, wherein the sound effects processor provides delay to the auxiliary sound components for each sound channel.

**Henry Cheng**  
**Serial No.: 09/643,981**  
**Response to Office Action dated October 5, 2004**

**Claim 29 (Original):** The method according to claim 23, wherein the sound effects processor provides chorus to the auxiliary sound components for each sound channel.